

4311-AM-P

DEPARTMENT OF THE INTERIOR

U.S. Geological Survey

[GX15RB00CMFCA00]

Agency Information Collection Activities: Request for Comments

AGENCY: U.S. Geological Survey (USGS), Interior.

ACTION: Notice of a new information collection: Use of Landsat satellite imagery in water resource management in the Western United States.

SUMMARY: We (the U.S. Geological Survey) will ask the Office of Management and Budget (OMB) to approve the information collection (IC) described below. As required by the Paperwork Reduction Act (PRA) of 1995, and as part of our continuing efforts to reduce paperwork and respondent burden, we invite the general public and other Federal agencies to take this opportunity to comment on this IC.

DATES: To ensure that your comments are considered, we must receive them on or before

[INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may submit comments on this information collection to the Information Collection Clearance Officer, U.S. Geological Survey, 12201 Sunrise Valley Drive MS 807, Reston, VA 20192 (mail); (703) 648–7197 (fax); or *gs-info_collections@usgs.gov* (email). Please reference ‘Information Collection 1028-NEW,

Landsat satellite imagery use in Western United States water resource management' in all correspondence.

FOR FURTHER INFORMATION CONTACT: Larisa Serbina, Economist, at (970) 222–9073 or *lserbina@usgs.gov*.

SUPPLEMENTARY INFORMATION:

I. Abstract

Water resources in the Western United States (U.S.) are scarce and recent droughts have only exacerbated disputes over water usage. As such, managing water resources effectively and efficiently is important for both private and public sector water users. However, monitoring water use comprehensively can be difficult using only on-the-ground techniques, due to the labor and time required for such efforts. Recent case studies initiated by the U.S. Geological Survey's (USGS) Land Remote Sensing (LRS) Program have indicated that Landsat satellite imagery plays an important role in Western U.S. water resource management. Landsat satellites are the only satellites to continuously collect the thermal imagery needed to measure evapotranspiration and provide it to the public at no cost. Evapotranspiration derived from thermal imagery can be used to objectively assess present and past water use on the landscape. For example, thermal data from Landsat satellites has been used in court cases to help settle water disputes. Landsat satellites also provide a range of other imagery which are used in water resource management. For example, the imagery can be used to identify different types of vegetation, such as agricultural crop types. There are unique considerations users must address in using Landsat imagery in water resources applications. The newest Landsat satellite, Landsat 8, launched in 2013, has two thermal spectral bands whereas the Landsat 7 satellite has one band. Thermal imagery from both Landsats 7 and 8 is also collected at a lower spatial resolution

(60 meters and 100 meters, respectively) than the multispectral imagery collected by these satellites, though it is resampled to the same 30-meter resolution as the rest of the imagery.

While the handful of completed case studies have indicated the importance of Landsat imagery in water resource management, a broader picture of the use of the imagery by water resources users is not available. This makes it difficult for LRS to meet the needs of these users both now and in the future.

Given the consistency in water rights and the general scarcity of water in the Western U.S. as compared to the rest of the nation, we are proposing a survey that will focus specifically on the users who apply Landsat imagery in water resources in this region. Questions will be asked to determine the extent and type of use of Landsat imagery in water resource management projects, the preferred characteristics (e.g., spatial resolution, frequency of image collection) of Landsat imagery for use in water resource management, and the benefits and challenges of using Landsat imagery in water resource management. The results will be aggregated to provide a more holistic assessment of the use of Landsat in water resource management in the Western U.S., including characterizations of use by sector (i.e., private, government, academic, non-profit) and geographic region (i.e., ecoregions, states). The overall goal of the survey is to provide a more complete understanding of Landsat use in water resource management in the Western U.S. in order to assist LRS in meeting the needs of these users. The survey will be conducted entirely online. As no comprehensive list of water resources managers, researchers, and professionals who use Landsat is available, a list of email addresses will be compiled through a robust online search followed by snowball sampling during survey administration. To protect the

confidentiality and privacy of survey respondents, email addresses will not be associated with the data collected on the survey and all analyses will be conducted and reported on in aggregate. All files containing email addresses will be password-protected and encrypted, housed on secure USGS servers, and only accessible to the research team. No PII will be collected on the survey itself.

II. Data

OMB Control Number: 1028-NEW.

Title: Use of Landsat satellite imagery in water resource management in the Western United States

Type of Request: New information collection.

Affected Public: Private sector, state government, local government, non-governmental organizations

Respondent's Obligation: Voluntary

Frequency of Collection: One time

Estimated Annual Number of Respondents: 1,000

Estimated Total Number of Annual Responses: 1,000

Estimated Time per Response: 10 minutes

Estimated Annual Burden Hours: 167 hours

Estimated Reporting and Recordkeeping "Non-Hour Cost" Burden: None.

Public Disclosure Statement: The PRA (44 U.S.C. 3501, et seq.) provides that an agency may not conduct or sponsor and you are not required to respond to a collection of information unless it displays a currently valid OMB control number and current expiration date.

III. Request for Comments

We are soliciting comments as to: (a) Whether the proposed collection of information is necessary for the agency to perform its duties, including whether the information is useful; (b) the accuracy of the agency's estimate of the burden of the proposed collection of information; (c) ways to enhance the quality, usefulness, and clarity of the information to be collected; and (d) how to minimize the burden on the respondents, including the use of automated collection techniques or other forms of information technology.

Please note that the comments submitted in response to this notice are a matter of public record. Before including your personal mailing address, phone number, email address, or other personally identifiable information in your comment, you should be aware that your entire comment, including your personally identifiable information, may be made publicly available at any time. While you can ask us in your comment to withhold your personally identifiable information from public view, we cannot guarantee that we will be able to do so.

David Hamilton

Fort Collins Science Center Director

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